APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,402	09/18/2003	Naotoshi Watanabe	FUJY 20.636	4448

26304 7590 04/20/2007	EXAMINER
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ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td></tr>
<tr><td>10/664,402</td><td>WATANABE, NAOTOSHI</td></tr>
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	Application No.	Applicant(s)
Office Action Summary	10/664,402	WATANABE, NAOTOSHI
	Examiner	Art Unit
	Jordan Hamann	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 September 2003</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-4, 11, 12, 15, 18 and 21-24</u> is/are rejected.

7)☒ Claim(s) <u>5-10, 13, 14, 16, 17, 19 and 20</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>18 September 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/18/03</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   Figure 28 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

4.   Claim 22 recites the limitation "said standby system" in the 12th line of the claim.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1, 4, 12, 18 and 21-24 are rejected under 35 U.S.C. 102(b) as being

anticipated by Leung (US 6,195,705 B1).

With respect to claim 1, Leung discloses a routing system comprising:

(A) an active system routing device (column 7 lines 18-36, active home agent)

including: a storage unit storing a first address and a second address (column 10 lines

40-56, mobility binding table is stored including the home address and care-of address

as shown in Figure 5) in a way that maps the first address and the second address to

each other on the basis of a registration request sent from a mobile node having the first

address and the second address, the registration request containing the first address

and the second address mapping to each other (column 10 lines 26-39, a registration

request is received from a mobile node through a foreign agent containing the fields

shown in Figure 5); a general data forwarding unit forwarding general data to the

second address according to said storage unit (column 7 lines 18-36, the home agent

forwards packets to the foreign agent for the mobile node); and a registration request

forwarding unit forwarding the registration request to a standby system routing device

(column 10 lines 40-56, registration update is sent to the standby home agent to update

mobility binding table); and

(B) a standby system routing device, in addition to a storage unit and a general

data forwarding unit corresponding to those included in said active system routing

device (column 7 lines 18-36, each home agent is able to act as an active or standby

home agent), including: a monitoring unit monitoring a status of said active system

routing device (Figure 6 Elements 640 and 644); and a switchover unit switching over ·

said standby system routing device to an active system if said monitoring unit judges

that a fault occurs in said active system routing device (Figure 6 Element 646).

With respect to claim 4, Leung discloses, wherein said registration request

forwarding unit forwards a part of the registration request received by said active system

routing device to said standby system routing device (column 10 lines 40-56,

registration update is sent to the standby home agent to update mobility binding table).

With respect to claim 21, Leung discloses, wherein the first address is an

address used by said mobile node in a network where said active system routing device

and said standby system routing device are located (Figure 5 Element 531 and column

11 lines 33-35), and the second address is an address used by said mobile node in a

network different from the network where said active system routing device and said

standby system routing device are located (Figure 5 Element 533 and column 11 lines

41-44).

With respect to claim 12, Leung discloses a routing system comprising:

(A) an active system routing device (column 7 lines 18-36, active home agent) including: a storage unit storing a first address and a second address (column 10 lines 40-56, mobility binding table is stored including the home address and care-of address as shown in Figure 5) in a way that maps the first address and the second address to each other on the basis of a registration request sent from a mobile node having the first address and the second address, the registration request containing the first address and the second address mapping to each other (column 10 lines 26-39, a registration request is received from a mobile node through a foreign agent containing the fields shown in Figure 5); a general data forwarding unit forwarding general data to the second address according to said storage unit (column 7 lines 18-36, the home agent forwards packets to the foreign agent for the mobile node); and an address transmitting unit transmitting the second address stored on said storage unit to a standby system routing device (column 10 lines 40-56, registration update is sent to the standby home agent to update mobility binding table); and

(B) a standby system routing device, in addition to a storage unit and a general data forwarding unit corresponding to those included in said active system routing device (column 7 lines 18-36, each home agent is able to act as an active or standby home agent), including: a registering unit registering said storage unit with the second address received from said active system routing device (column 2 lines 4-19, each home agent contains and mobility binding table and can negotiate communication

parameters with a foreign agent); a monitoring unit monitoring a status of said active

system routing device (Figure 6 Elements 640 and 644); a switchover unit switching

over said standby system routing device to an active system if said monitoring unit

judges that a fault occurs in said active system routing device (Figure 6 Element 646);

and a transmission request unit sending a transmission request for transmitting the

registration request to the second address stored on said storage unit when said

switchover unit executes the switchover (column 2 lines 4-19, each home agent can

negotiate communication parameters with a foreign agent).

With respect to claim 18, Leung discloses a routing system comprising:

(A) an active system routing device (column 7 lines 18-36, active home agent)

including: a storage unit storing a first address and a second address (column 10 lines

40-56, mobility binding table is stored including the home address and care-of address

as shown in Figure 5) in a way that maps the first address and the second address to

each other on the basis of a registration request sent from a mobile node having the first

address and the second address, the registration request containing the first address

and the second address mapping to each other (column 10 lines 26-39, a registration

request is received from a mobile node through a foreign agent containing the fields

shown in Figure 5); and a general data forwarding unit forwarding general data to the

second address according to said storage unit (column 7 lines 18-36, the home agent

forwards packets to the foreign agent for the mobile node);

(B) a standby system routing device including a storage unit corresponding to the

storage unit included in the active device and a general data forwarding unit

corresponding to the general data forwarding unit included in the active device (column

7 lines 18-36, each home agent is able to act as an active or standby home agent); and

(C) an allocating device including: an allocation storage unit storing the first

address of said mobile node and addresses of said active system routing device and of

said standby system routing devices in a way that maps these addresses to each other

(column 10 lines 26-56, the mobility binding table contains the home address of the

mobile node, and the active home agent knows standby home agent address to send

updates and hello messages); and a registration request forwarding unit forwarding, the

registration request to said addresses of said active system routing device and said

standby system routing device, said addresses mapping to the first address contained

in the received registration request (column 10 lines 40-56, registration update is sent to

the standby home agent to update mobility binding table).

With respect to claim 22, Leung discloses an active system routing device

(column 7 lines 18-36, active home agent) comprising: a storage unit storing a first

address and a second address (column 10 lines 40-56, mobility binding table is stored

including the home address and care-of address as shown in Figure 5) in a way that

maps the first address and the second address to each other on the basis of a

registration request sent from a mobile node having the first address and the second

address, the registration request containing the first address and the second address

mapping to each other (column 10 lines 26-39, a registration request is received from a mobile node through a foreign agent containing the fields shown in Figure 5); a general data forwarding unit forwarding general data to the second address according to said storage unit (column 7 lines 18-36, the home agent forwards packets to the foreign agent for the mobile node); and a registration request forwarding unit forwarding the registration request to a standby system routing device (column 10 lines 40-56, registration update is sent to the standby home agent to update mobility binding table).

With respect to claim 23, Leung discloses a standby system routing device (column 7 lines 18-36, each home agent is able to act as an active or standby home agent), comprising: a receiving unit receiving, from an active system routing device, a registration request containing a first address and a second address held by a mobile node (column 10 lines 40-56, registration update is sent to the standby home agent to update mobility binding table shown in Figure 5); a storage unit storing the first address and the second address in a way that maps the first and second addresses to each other on the basis of the registration request received address (column 10 lines 40-56, mobility binding table is stored including the home address and care-of address as shown in Figure 5); a general data forwarding unit forwarding general data to the second address according to said storage unit (column 7 lines 18-36, the home agent forwards packets to the foreign agent for the mobile node; a monitoring unit monitoring a status of said active system routing device (Figure 6 Elements 640 and 644); and a switchover unit switching over said standby system routing device to an active system if

said monitoring unit judges that a fault occurs in said active system routing device

(Figure 6 Element 646).

With respect to claim 24, Leung discloses a network system comprising: an

active system home agent (HA) (column 7 lines 18-36, active home agent) updating a

control table upon receiving a location registration message (column 10 lines 40-41)

and forwarding the location registration message to a standby system home agent (HA)

(column 10 lines 40-56, registration update is sent to the standby home agent to update

mobility binding table); and a standby system home agent (HA) (column 7 lines 18-36,

each home agent is able to act as an active or standby home agent) updating a backup

control table upon receiving the location registration message (column 10 lines 50-53).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leung

(US 6,195,405 B1).

Leung discloses wherein said active system routing device further includes a

registration acknowledgement sending unit sending a registration acknowledgement to

the registration request to said mobile node (column 2 lines 4-19 each home agent can negotiate communication parameters with a foreign agent).

Leung does not explicitly disclose said standby system routing device further includes an acknowledgement stopping unit which stops sending registration acknowledgement to the forwarded registration request.

Leung does disclose the standby agent taking over for the active agent and handling the registration of a mobile node (column 4 lines 17-39).

At the time of the invention, it would have been obvious to a person or ordinary skill in the art to stop the active agent from completing a registration request when it no longer acts as the active home agent and the standby agent begins to act as the active agent.

The motivation for doing so would have been to have only one agent registering the mobile node, that agent being the current active home agent.

9.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leung

(US 6,195,405 B1) in view of Borella et al (US 7,080,151 B1).

Leung discloses wherein the monitoring unit monitors hello messages sent by the

active system routing device (column 13 lines 14-60), but does not disclose the hello

messages as ICMP messages.

Borella disclose a system of active and redundant home agents (Figure 6) using

ICMP messages for reachablility testing (column 5 lines 52-65).

Leung and Borella are analogous art because they are from the same field of

endeavor of providing standby home agents in a Mobile IP network.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to us ICMP messages as the hello message of Leung.

The motivation would have been to use a well-known IP protocol to monitor if an

agent is reachable.

10.   Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Leung (US 6,195,705 B1) in view of Ton (US 6,771,623 B2).

Leung does not explicitly disclose a load information obtaining unit.

Ton discloses a Mobile IP system with multiple home agents (Figure 1) obtaining

load information of all the home agents available (column 6 lines 23-55 and column 9

lines 22-35). If the contacted home agent has insufficient resources or fails, the

registration request is refused or fails and the registration information is not forwarded to

a standby agent. A standby home agent then becomes the primary home agent for the mobile node and completes the registration.

Leung and Ton are analogous art because they are from the same field of endeavor of registering mobile nodes with home agents in a Mobile IP network.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a load information obtaining unit as taught by Ton in the system of Leung.

The motivation would for doing so would have been to share the load of an active home agent in addition to having primary and secondary home agents.

Allowable Subject Matter

11.   Claims 5-10, 13, 14, 16, 17, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan Hamann whose telephone number is (571) 272-8564. The examiner can normally be reached on Monday-Thursday 8:30-5:30 and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJH

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